

Giant colonic diverticulum

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We report a case of a giant colonic diverticulum (GCD), an infrequent complication of diverticular disease. More frequent complications include phlegmonous diverticulitis (31%), abscess formation (31%), and free perforation (38%) (1).

CASE PRESENTATION

A 58-year-old Hispanic man presented to the emergency department at Baylor University Medical Center complaining of a 1-year history of intermittent abdominal pain associated with occasional nausea and vomiting. He had been seen previously in another emergency department for this pain and had been treated with oral antibiotics and discharged home. However, he did not have a primary care physician and did not undergo routine screenings or colonoscopic surveillance. The patient was afebrile, and his vital signs were stable. His abdomen was mildly tender to palpation in the left upper quadrant but did not exhibit signs of peritonitis. He was also noted to have a nontender reducible epigastric hernia that was away from the area of his pain.

Laboratory evaluations revealed a white blood cell count of $15.1 \times 10^3/\mu\text{L}$ with no bandemia. A computed tomography scan of the abdomen and pelvis with Gastrografin and Omni-paque 350 revealed a 12.1×9.8 -cm air-filled structure within the left upper quadrant (*Figure*). The structure exhibited mild wall thickening and appeared to contain a small volume of stool and liquid. It was surrounded by stranding inflammatory changes.

The patient was admitted to the general ward, given orders to take nothing by mouth, and treated with intravenous fluid resuscitation and intravenous antibiotics, and a gentle bowel prep was started. At operation, a large inflammatory mass was found in the left upper quadrant with extremely dense adhesions. Careful dissection disclosed that the large air-filled mass was a perforated sigmoid diverticulum that had volvulized over the splenic flexure. An inflammatory rind held the sigmoid adherent to the transverse colon. After dissecting the sigmoid and the accompanying inflammatory mass free and mobilizing the splenic flexure, we performed a left hemicolectomy and side-to-side functional end-to-end anastomosis between the proximal transverse colon and rectum. Pathologic assessment of the specimen revealed that the diverticulum was contiguous with a GCD. The cystic portion was $12.5 \times 12.5 \times 12.0$ cm, with a 0.2

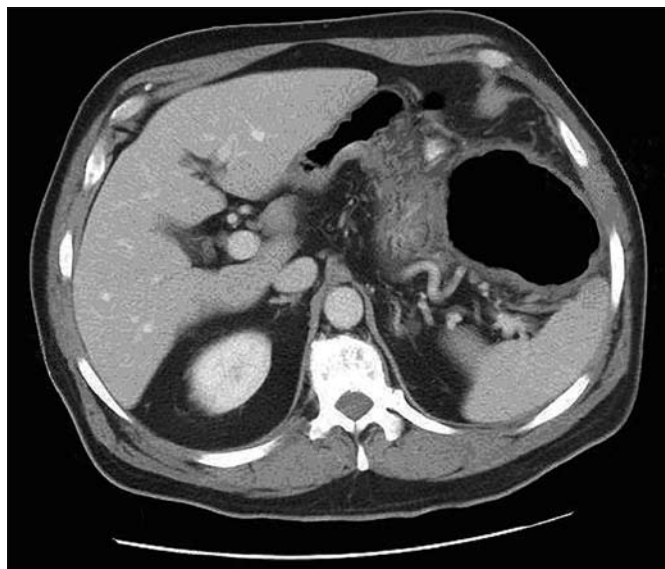


Figure. CT scan demonstrating a giant colonic diverticulum in the left upper quadrant, adjacent to and compressing the stomach.

cm diameter orifice. Surrounding inflammatory changes were present; two included lymph nodes were benign. The patient's recovery was uneventful, and on the sixth postoperative day he was discharged home.

DISCUSSION

CGD was first reported by Greene and Hughes in 1953 (2). Since then, 103 cases have been reported in 95 patients (3). Most (93%) originate from the sigmoid, and the diverticula must be at least 4 cm in diameter to meet the criteria of GCD (3, 4). Some GCD have been reported as large as 33 cm. Unlike most left-sided colonic diverticula, GCD often arise from the antimesenteric border of the colon (5).

GCD fall into two categories. True diverticula, accounting for 13% of cases, contain serosa, muscularis, submucosa, and mucosa in the wall. Pseudodiverticula, as this patient exhibits,

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do not have mucosa and account for 87% of cases (3, 5). The exact pathogenesis of GCD is unclear; however, it is proposed that the neck of the diverticulum becomes occluded, and gas from gas-forming organisms becomes trapped in a ball-valve mechanism (4). Other theories include pseudocyst formation secondary to diverticular microperforation and progressive dilation from worsening colonic inflammation (6).

Patients with GCD often present with abdominal pain (68%), vomiting (12%), and constipation (18%) (5). Other presentations may include abdominal distension, rectal bleeding, diarrhea, fever, and nausea. Reported complications include bowel obstruction, perforation, frank gastrointestinal hemorrhage, abscess formation, and sepsis. Furthermore, GCD possess a 2% risk of malignancy in the affected region (6).

Surgical resection of the diverticulum is the mainstay of treatment for GCD. Resection in continuity with the sigmoid colon is recommended because of risk of recurrence, since the disease process originates from the sigmoid colon (4). In the

setting of complications such as free perforation, a Hartmann's procedure is advised (4). However, successful conservative management with bowel rest, intravenous fluids, antimicrobial therapy, and pain management has been documented (6).

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